

**Call for application for research scholarships
for post-graduate international candidates**

RESEARCH PROJECT N. 8

Title

“Are smart cities also quieter and healthier? A case study with 50 European cities”

Scientific responsible (name, surname, role)

Arianna Astolfi, Associate Professor, Director of the Applied Acoustics group – DENERG
(arianna.astolfi@polito.it)

Short description of the research activity (max 250 words)

Background

Making cities “smarter” is high on the agenda of the European Union and in many other countries worldwide. Several frameworks have been developed in literature to assess cities against ‘smart’ descriptors (e.g., smart economy, smart people, smart governance, smart mobility, smart environment, smart living, etc.). On the other hand, modern cities face many environmental challenges to mitigate possible adverse effects of multiple environmental stressors on local communities. Currently, it is not clear how such environmental factors are taken into account in the definition of a smart concept, which makes it in turn difficult for policy makers and governmental bodies to define clear strategies for urban developments

Methodology

This research will review the literature about smart cities, as well as noise and air quality monitoring in major EU agglomerations. It will compare different large databases, which are publicly available from research bodies and institutional web repositories, to investigate whether smart cities rankings are consistent with low level of exposure to the major environmental stressors in a set of EU cities. Depending on the outcomes of this meta-analysis, guidelines and/or recommendation for revising smart cities frameworks will be provided.

Expected scientific output and follow-up

Ideally, the research training programme will lead to one journal paper and one conference paper to be presented at a[n] (inter)national congress. Such publications will form the basis to draft a more structured PhD dissertation proposal that will be submitted to Politecnico di Torino by the research student in due time.

Specific requirements (experiences, skills)

Background in Urban Planning, Architecture or Environmental Engineering is desirable. Former experience of working with small- to medium databases and ability to perform statistical analysis with software package (e.g., SPSS or similar) is required. Additional experience of working with software for environmental monitoring and simulation or GIS platforms will be considered as great advantage.

Website of the research group (if any)

http://www.tebe.polito.it/research/applied_acoustics

The present form should be filled in English and sent to scudo@polito.it by 2nd October 2017

Keywords (min 3, max 6)

European Union, smart cities, environmental noise, air pollution, big data

Research Area (max 1)

Urban Studies and Planning